

Nucleonics sequence listing v5.txt  
SEQUENCE LISTING

<110> Nucleonics, Inc.  
Pachuk, Catherine  
Satishchandran, C.  
Zurawski, Vincent  
Mintz, Liat

<120> Conserved HBV and HCV Sequences Useful for Gene Silencing

<130> 26788-002

<150> 60/478,076  
<151> 2003-06-12

<160> 48

<170> PatentIn version 3.2

<210> 1  
<211> 138  
<212> DNA  
<213> Hepatitis B Virus

<220>  
<221> misc\_feature  
<222> (137)..(137)  
<223> n is a, c, g, or t

<400> 1  
gaacatggag arcayhdcac caggaytcct aggacccctg ctcgtgttac aggcggkgtk 60  
tttctygttg acaaraatcc tcacaatacc dcagagtcta gactcgtggt ggacttctct 120  
caattttcta ggggdany 138

<210> 2  
<211> 26  
<212> DNA  
<213> Hepatitis B Virus

<400> 2  
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<210> 3  
<211> 206  
<212> DNA  
<213> Hepatitis B Virus

<220>  
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<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (111)..(111)  
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (140)..(140)
<223> n is a, c, g, or t

<220>
<221> misc_feature
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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (177)..(177)
<223> n is a, c, g, or t

<400> 3
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ctntgccaaag tgtttgctga cgcaaccccc actgghtggg gcttggybat nggccatcrs      120
cgcatgcgtg gaacctttbn gkctcctctg ccgatccata ctgcggaact cctngcngcb      180
tgtttygctc gcagcmggtc tggrgc                                           206

<210> 4
<211> 119
<212> DNA
<213> Hepatitis B Virus

<400> 4
yactgttcaa gcctcaagct gtgccttggg tggctttrgg rcatggacat tgacmcktat      60
aaagaatttg gagctwctgt ggagttactc tcdtttttgc cttcygactt ytttccttc      119

<210> 5
<211> 101
<212> DNA
<213> Hepatitis B Virus

<400> 5
cgabgcaggt cccctagaag aagaactccc tcgcctcgca gacgmgrtct caatcgmcgc      60
gtcgcagaag atctcaatyt cggaatcty aatgttagta t                             101

<210> 6
<211> 99
<212> DNA
<213> Hepatitis B Virus

<400> 6
abgcaggtcc cctagaagaa gaactccctc gcctcgcaga cgmgrtctca atcgmcgcgt      60
cgcagaagat ctcaatycg ggaatctyaa tgtttagtat                             99

<210> 7
<211> 100
<212> DNA
<213> Hepatitis B Virus

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## Nucleonics sequence listing v5.txt

<400> 7  
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 tcgcagaaga tctcaatytic gggaatctya atgttagtat 100

<210> 8  
 <211> 100  
 <212> DNA  
 <213> Hepatitis B Virus

<400> 8  
 gabgcaggtc ccctagaaga agaactccct cgcctcgcag acgmgrtctc aatcgmcgcg 60  
 tcgcagaaga tctcaatytic gggaatctya atgttagtat 100

<210> 9  
 <211> 104  
 <212> DNA  
 <213> Hepatitis B Virus

<220>  
 <221> misc\_feature  
 <222> (9)..(9)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (38)..(38)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (72)..(72)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (75)..(75)  
 <223> n is a, c, g, or t

<400> 9  
 ttggybatng gccatcrscg catgcgtgga acctttbngk ctctctgccc gatecatact 60  
 gcggaactcc tngcngcbtg ttttgctcgc agcmggtctg grgc 104

<210> 10  
 <211> 71  
 <212> DNA  
 <213> Hepatitis B Virus

<220>  
 <221> misc\_feature  
 <222> (71)..(71)  
 <223> n is a, c, g, or t

<400> 10  
 ctgccaaactg gathcthcg cggacgtcct ttgtytacgt cccgtrcgcg ctgaatcchg 60

## Nucleonics sequence listing v5.txt

71

cggacgacccc n

<210> 11  
 <211> 490  
 <212> DNA  
 <213> Hepatitis C Virus

<220>  
 <221> misc\_feature  
 <222> (86)..(86)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (434)..(434)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (455)..(455)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (476)..(476)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (488)..(488)  
 <223> n is a, c, g, or t

<400> 11  
 ddatcactcc cctgtgagga actactgtct tcacgcagaa agcgtctagc catggcggtta 60  
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 aaccggtgag tacaccggaa ttgccrghah gaccgggtcc tttcttgat daacccgctc 180  
 watgccyga vatttgggag tgccccgcr agacygctag ccgagtagyg ttgggtygcg 240  
 aaaggccttg tggtagctgc tgataggggtg cttgcgagtg ccccgaggag tctcgtagac 300  
 cgtgcahcat gagcacrmwt cchaaacchc aaagaaaaac caaamgwaac accaaccgyc 360  
 gccacagga cgthaagttc ccgggyggyg ghcagatcgt tggbggagth tacbtgttgc 420  
 cgcgcagggg cccnmvdttg ggtgtgcgcg cgacnaggaa gacttcbar cggtcncarc 480  
 chcgghgnag 490

<210> 12  
 <211> 29  
 <212> DNA  
 <213> Hepatitis C Virus

<220>  
 <221> misc\_feature  
 <222> (6)..(6)

## Nucleonics sequence listing v5.txt

&lt;223&gt; n is a, c, g, or t

&lt;400&gt; 12

atggcntggg atatgatgat gaactggyc

29

&lt;210&gt; 13

&lt;211&gt; 265

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 13

aaggctcgggc aggaagaggg cctatttccc atgattcctt catatttgca tatacgatac 60

aaggctgtta gagagataat tagaattaat ttgactgtaa acacaaagat attagtacaa 120

aatacgtgac gtagaaagta ataatttctt gggtagtttg cagttttaaa attatgtttt 180

aaaatggact atcatatgct taccgtaact tgaaagtatt tcgatttctt ggctttatat 240

atcttgtgga aaggacgaaa caccg 265

&lt;210&gt; 14

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 788-808 in  
Genebank accession # V01460

&lt;400&gt; 14

cgtctgcgag gcgagggagt tagagaactt aactccctcg cctcgcagac g

51

&lt;210&gt; 15

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 807-827 in  
Genebank accession # V01460

&lt;400&gt; 15

ttcttcttct aggggacctg cagagaactt gcaggctccc tagaagaaga a

51

&lt;210&gt; 16

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1291-1311  
in Genebank accession # V01460

&lt;400&gt; 16

aagccacca aggcacagct tagagaactt aagctgtgcc ttgggtggct t

51

&lt;210&gt; 17

## Nucleonics sequence listing v5.txt

<211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1299-1319  
 in Genebank accession # V01460  
  
 <400> 17  
 caaggcacag cttggaggct tagagaactt aagcctccaa gctgtgcctt g 51  
  
 <210> 18  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1737-1757  
 in Genebank accession # V01460  
  
 <400> 18  
 ggattcagcg ccgacgggac gagagaactt cgtcccgtcg gcgctgaatc c 51  
  
 <210> 19  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1907-1927  
 in Genebank accession # V01460  
  
 <400> 19  
 ttccgcagta tggatcgga gagagaactt ctgccgatcc atactgcgga a 51  
  
 <210> 20  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1912-1932  
 in Genebank accession # V01460  
  
 <400> 20  
 cagtatggat cggcagagga gagagaactt ctctctgcc gatccatact g 51  
  
 <210> 21  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1943-1963  
 in Genebank accession # V01460  
  
 <400> 21  
 tccacgcatg cgctgatggc cagagaactt ggccatcagc gcatgcgtgg a 51

## Nucleonics sequence listing v5.txt

<210> 22  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 1991-2011  
in Genebank accession # V01460

<400> 22  
tgcgtcagca aacacttggc aagagaactt tgccaagtgt ttgctgacgc a 51

<210> 23  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 2791-2811  
in Genebank accession # V01460

<400> 23  
aaaacgccgc agacacatcc aagagaactt tggatgtgtc tgcggcgttt t 51

<210> 24  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<223> eiRNA encoding sequence mapping to HBV-AYW coordinates  
2791-2811mut in Genebank accession # V01460

<400> 24  
aaaacaccac acacgcatcc aagagaactt tggatgcgtg tgtggtgttt t 51

<210> 25  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 2912-2932  
in Genebank accession # V01460

<400> 25  
ttgagagaag tccaccacga gagagaactt ctcgtggtgg acttctctca a 51

<210> 26  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<223> eiRNA encoding sequence mapping to HBV-AYW coordinates 2919-2939  
in Genebank accession # V01460

<400> 26

## Nucleonics sequence listing v5.txt

aagtcacca cgagtctaga cagagaactt gtctagactc gtggtggact t 51

<210> 27  
 <211> 101  
 <212> DNA  
 <213> Hepatitis C Virus

<400> 27  
 ttggtggct ccatcttagc cctagtcacg gctagctgtg aaagggtccgt gagccgcttg 60  
 actgcagaga gtgctgatac tggcctctct gcagatcaag t 101

<210> 28  
 <211> 29  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus  
 <400> 28  
 gctaaacact ccaggccaat acctgtctc 29

<210> 29  
 <211> 29  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus  
 <400> 29  
 tcctttggtg gctccatctt acctgtctc 29

<210> 30  
 <211> 29  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus  
 <400> 30  
 gctccatctt agccctagtc acctgtctc 29

<210> 31  
 <211> 29  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus  
 <400> 31  
 tcttagccct agtcacggct acctgtctc 29

<210> 32



## Nucleonics sequence listing v5.txt

<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 32  
cctagtcacg gctagctgtg acctgtctc 29

<210> 33  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 33  
ctagtcacgg ctagctgtga acctgtctc 29

<210> 34  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 34  
cgtgagccgc ttgactgcag acctgtctc 29

<210> 35  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 35  
gctgatactg gctctctgc acctgtctc 29

<210> 36  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 36  
actggcctct ctgcagatca acctgtctc 29

<210> 37  
<211> 21  
<212> DNA  
<213> Artificial

## Nucleonics sequence listing v5.txt

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 37  
ctggcctctc tgcagatcaa g 21

<210> 38  
<211> 21  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 38  
tgcagagagt gctgatactg g 21

<210> 39  
<211> 21  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 39  
tgagccgctt gactgcagag a 21

<210> 40  
<211> 20  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 40  
gaaaggtccg tgagccgctt 20

<210> 41  
<211> 21  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 41  
tagctgtgaa aggtccgtga g 21

<210> 42  
<211> 21  
<212> DNA  
<213> Artificial

<220>  
<223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

## Nucleonics sequence listing v5.txt

<400> 42  
 ttagccctag tcacggctag c 21

<210> 43  
 <211> 21  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 43  
 tccatcttag ccctagtcac g 21

<210> 44  
 <211> 21  
 <212> DNA  
 <213> Artificial

<220>  
 <223> siRNA encoding sequence mapping to X region of Hepatitis C Virus

<400> 44  
 ttggtggctc catcttagcc c 21

<210> 45  
 <211> 21  
 <212> RNA  
 <213> Hepatitis C Virus

<400> 45  
 aaccucaaag aaaaaccaa c 21

<210> 46  
 <211> 21  
 <212> RNA  
 <213> Artificial

<220>  
 <223> ~~lamin siRNA~~

<400> 46  
 aacuggacuu ccagaagaac a 21

<210> 47  
 <211> 2652  
 <212> DNA  
 <213> Bacteriophage T7

<400> 47  
 atgaacacga ttaacatcgc taagaacgac ttctctgaca tcgaactggc tgctatccccg 60  
 ttcaacactc tggctgacca ttacggtgag cgtttagctc gcgaacagtt ggcccttgag 120  
 catgagtctt acgagatggg tgaagcacgc ttccgcaaga tgtttgagcg tcaacttaaa 180  
 gctggtgagg ttgcggataa cgctgccgcc aagcctctca tcactaccct actccctaag 240

## Nucleonics sequence listing v5.txt

atgattgcac gcatcaacga ctggtttgag gaagtgaag ctaagcgcg caagcgccc	300
acagccttcc agttcctgca agaaatcaag ccggaagccg tagcgtagat caccattaag	360
accactctgg cttgcctaac cagtgtgac aatacaaccg ttcaggctgt agcaagcgca	420
atcggtcggg ccattgagga cgaggctcgc ttcggtcgta tccgtgacct tgaagctaag	480
cacttcaaga aaaacgttga ggaacaactc aacaagcgcg tagggcacgt ctacaagaaa	540
gcatttatgc aagttgtcga ggctgacatg ctctctaagg gtctactcgg tggcgaggcg	600
tggctttcgt ggcataagga agactctatt catgtaggag tacgctgcat cgagatgctc	660
attgagtcaa ccggaatggt tagcttacac cgccaaaatg ctggcgtagt aggtcaagac	720
tctgagacta tcgaactcgc acctgaatac gctgaggcta tcgcaaccgg tgcagggtgcg	780
ctggctggca tctctccgat gttccaacct tgcgtagttc ctctaagcc gtggactggc	840
attactggtg gtggctattg ggctaacggt cgtcgtcctc tggcgctggt gcgtactcac	900
agtaagaaag cactgatgcg ctacgaagac gtttacatgc ctgagggtga caaagcgatt	960
aacattgctc aaaacaccgc atggaaaatc aacaagaaag tcctagcggg cgccaacgta	1020
atcaccaagt ggaagcattg tccggtcgag gacatccctg cgattgagcg tgaagaactc	1080
ccgatgaaac cggaagacat cgacatgaat cctgaggctc tcaccgctg gaaacgtgct	1140
gccgctgctg tgtaccgcaa ggacagggtc cgcaagtctc gccgtatcag ccttgagttc	1200
atgcttgagc aagccaataa gtttgctaac cataaggcca tctggttccc ttacaacatg	1260
gactggcgcg gtcgtgttta cgctgtgtca atgttcaacc cgcaaggtaa cgatatgacc	1320
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aaaatccacg gtgcaactg tgcgggtgtc gataagggtc cgttccctga gcgcatcaag	1440
ttcattgagg aaaaccacga gaacatcatg gcttgcgcta agtctccact ggagaacact	1500
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gtacagcacc acggcctgag ctataactgc tcccttccgc tggcgtttga cgggtcttgc	1620
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ttgcttccta gtgaaaccgt tcaggacatc tacgggattg ttgctaagaa agtcaacgag	1740
attctacaag cagacgcaat caatgggacc gataacgaag tagttaccgt gaccgatgag	1800
aacactggtg aaatctctga gaaagtcaag ctgggcacta aggcactggc tgggtcaatgg	1860
ctggcttacg gtgttactcg cagtgtgact aagcgttcag tcatgacgct ggcttacggg	1920
tccaaagagt tcggcttccg tcaacaagtg ctggaagata ttattcagcc agctattgat	1980
tccggcaagg gtctgatgtt cactcagccg aatcaggctg ctggatacat ggctaagctg	2040
atgttgggaat ctgtgagcgt gacggtggta gctgcggttg aagcaatgaa ctggcttaag	2100

## Nucleonics sequence listing v5.txt

tctgctgcta agctgctggc tgctgaggtc aaagataaga agactggaga gattcttcgc	2160
aagcgttgcg ctgtgcattg ggtaactcct gatggtttcc ctgtgtggca ggaatacaag	2220
aagcctattc agacgcgctt gaacctgatg ttcctcggtc agttccgctt acagcctacc	2280
attaacacca acaaagatag cgagattgat gcacacaaac aggagtctgg tatcgctcct	2340
aactttgtac acagccaaga cggtagccac cttcgtaaga ctgtagtgtg ggcacacgag	2400
aagtacggaa tcgaatcttt tgcactgatt cacgactcct tcggtaccat tccggctgac	2460
gctgcgaacc tgttcaaagc agtgcgcgaa actatggttg acacatatga gtcttgtgat	2520
gtactggctg atttctacga ccagttcgct gaccagttgc acgagtctca attggacaaa	2580
atgccagcac ttccggctaa aggtaacttg aacctccgtg acatcttaga gtcggacttc	2640
gcgttcgcgt aa	2652

&lt;210&gt; 48

&lt;211&gt; 323

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; T7 polymerase-based eRNA

&lt;400&gt; 48

atcactcccc tgtgaggaac tactgtcttc acgcagaaag cgtctagcca tggcgtagt	60
atgagtgtcg tgcagcctcc aggaccccc ctcccgggag agccatagtg gtctgcggaa	120
ccggtgagta caccggaatt gccaggacga ccgggtcctt tcttggatga acccgctcaa	180
tgcctggaga tttgggcgtg cccccgcgag actgctagcc gagtagtgtt gggtcgcgaa	240
aggccttgtg gtactgcctg atagggtgct tgcgagtgcc ccgggagggtc tcgtagaccg	300
tgcacatga gcacaaatcc taa	323